

CLEAN COPY OF THE PENDING CLAIMS

37. An isolated monoclonal antibody produced by a hybridoma selected from the group consisting of A1G5 having Accession No. FERM BP-7441, D2F4 having Accession No. FERM BP-7442, and E3H8 having Accession No. FERM BP-7443 recognizing osteoclastogenesis inhibitory factor.

38. The isolated monoclonal antibody of claim 37 wherein said hybridoma is A1G5 having Accession No. FERM BP-7441.

39. The isolated monoclonal antibody of claim 37 wherein said hybridoma is D2F4 having Accession No. FERM BP-7442.

40. The isolated monoclonal antibody of claim 37 wherein said hybridoma is E3H8 having Accession No. FERM BP-7443.

41. An assay kit for determination of osteoclastogenesis inhibitory factor protein concentration, the assay kit comprising at least one monoclonal antibody produced by a hybridoma selected from the group consisting of A1G5 having Accession No. FERM BP-7441, D2F4 having Accession No. FERM BP-7442, and E3H8 having Accession No. FERM BP-7443.

42. The assay kit of claim 41 wherein said hybridoma is A1G5 having Accession No. FERM BP-7441.

43. The assay kit of claim 41 wherein said hybridoma is D2F4 having Accession No. FERM BP-7442.

44. The assay kit of claim 41 wherein said hybridoma is E3H8 having Accession No. FERM BP-7443.

45. Hybridoma selected from the group consisting of A1G5 having Accession No. FERM BP-7441, D2F4 having Accession No. FERM BP-7442, and E3H8 having Accession No. FERM BP-7443.

46. The hybridoma of claim 45 wherein said hybridoma is A1G5 having Accession No. FERM BP-7441.

47. The hybridoma of claim 45 wherein said hybridoma is D2F4 having Accession No. FERM BP-7442.

48. The hybridoma of claim 45 wherein said hybridoma is E3H8 having Accession No. FERM BP-7443.

49. (Amended) A monoclonal antibody comprising a binding site which binds to osteoclastogenesis inhibitory factor protein, said protein characterized by:

- N.E.
- (a) molecular weights as determined by SDS-polyacrylamide gel electrophoresis (SDS-PAGE) of approximately 60 kD under reducing conditions, and
approximately 60 kD (a monomer) and 120 kD (a homodimer) under non-reducing conditions;
 - (b) high affinity to cation-exchange resins and heparin derivatives;
 - (c) inhibitory activity for osteoclast differentiation and/or maturation, wherein said activity is decreased by heating said protein at about 70°C for about 10 min. or at about 56°C for about 30 min., and wherein said activity is lost by heating at about 90°C for about 10 min.; and
 - (d) an internal amino acid sequence as provided in SEQ. ID NOS. 1, 2 or 3;

wherein said monoclonal antibody is produced by a hybridoma selected from the group consisting of AIG5 having Accession No. FERM BP-7441, D2F4 having Accession No. FERM BP-7442, and E3H8 having Accession No. FERM BP-7443 binding sites.